



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1480  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/820,257

04/08/2004

Bijendra N. Jain

CIS0094C1US

7510

33031 7590 05/29/2007  
CAMPBELL STEPHENSON ASCOLESE, LLP  
4807 SPICEWOOD SPRINGS RD.  
BLDG. 4, SUITE 201  
AUSTIN, TX 78759

EXAMINER

LE, DIEU MINH T

ART UNIT

PAPER NUMBER

2114

MAIL DATE

DELIVERY MODE

05/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/820,257	<b>Applicant(s)</b> JAIN ET AL.	
	<b>Examiner</b> Dieu-Minh Le	<b>Art Unit</b> 2114	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-90 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This Office Action is in response to the amendment filed 04/05/07.
2. Claims 14-90 are again presented for examination; claims 1-13 have been canceled.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Double Patenting rejection is overcome due to the submitting of Terminal Disclaimer on 04/05/07.
5. Claims 14-90 are again rejected under 35 U.S.C. § 103(a) as being unpatentable Ariel Orda and Raphael Rom (Routing with packet duplication and elimination in computer networks, IEEE Transactions on Communications, Vol. 36, No. 7, July 1988 hereafter referred to as Orda and Rom) view of Ofek (U.S. 6,760,328 hereafter referred to as Ofek).

This rejection is being applied for the same reasons set forth in the previous Office Action mailed 1/05/2007.

Art Unit: 2114

As per claims 41-90, see the previous office action for the detailed teaching of Orda/Rom and Srikrihna as well as the motivation and reason for combined.

Applicant asserts that Orda and Rom in combining with Ofek failed to teach or suggest the following:

- a. identifying a first network component in a first path using a first identifier stored in a data structure;
- b. removing the first identifier from the data structure;
- c. manipulate a data structure.

Examiner respectfully transverses Applicant's argument as follows:

- a. First, Examiner would like to bring Applicant's attention to Orda and Rom's routing with packet duplication and elimination in computer network using disjoint paths and network resources [abstract, fig.1 and 4, page 860]. In addition, Ofek explicitly teaches a method for data packets transmission network [abstract, fig. 1, col. 1, lines 10-17] **via** Internet MPLS (multi protocol label swapping or tag switching) capability [fig. 6A, col. 8, lines 48 through col. 9, line 11 and col. 14, lines 13-31].

Art Unit: 2114

Second, it is not TRUE that Orda and Rom in combining with Ofek failed to teach "identifying a first network component in a first path using a first identifier stored in a data structure" as claimed by Applicant. Orda and Rom explicitly illustrated the routing through disjoint paths via incoming and outgoing packet data [fig. 5]. Data is/are structured including data header (source/destination addresses), payload, ECC (checksum, etc...). the data source and destination addresses can easily removed and added for routing purpose. Ofek explicitly demonstrated data packet structure including header, timestamp, priority bit, etc... based on path identifiers used in supporting data communication transmission via Internet MPLS (multi protocol label swapping or tag switching) labels, ATM virtual circuit identifier and virtual path identifier (VCI/VPI), and IEEE 802 MAC (media access control) addresses, for mapping from an input port to an output port [fig. 6A, col. 8, lines 48 through col. 9, line 11 and col. 14, lines 13-31]. Therefore, it is very clear and it would have been obvious to an ordinary skill in the art to realize both Orda and Rom in combining with Ofek do teach Applicant's "identifying a first network component in a first path using a first identifier stored in a data structure" limitations.

Art Unit: 2114

Third, as indicated in previous Office Action that it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to first realizing Orda and Rom's distributed algorithm including optimal, deadlock free, loop free, packet duplication, network reliability, packet loss control, routing control, congestion control, packet switching, telecommunication traffic, etc...via multiple node, paths, and data packets including sources and destination addresses (i.e., data structure) as being the first and second identifier stored in a data structure as claimed by Applicant. This is because Orda and Rom explicitly performed data routing and duplicating within multiple network modes and paths in order to maximize the network transmission performance and throughput via OSFP. By utilizing these capabilities, the communication path between the data network components (i.e., host/servers, switches, routers environment) can be directed or redirected promptly and functioned properly during failover switching process in supporting the network operation; second, by applying the data packet structure including header, timestamp, priority bit, etc... based on path identifiers used in supporting data communication transmission via Internet MPLS (multi protocol label swapping or tag switching) labels, ATM virtual circuit identifier and virtual path identifier (VCI/VPI), and IEEE 802 MAC (media

access control) addresses, for mapping from an input port to an output port as taught by Ofek in conjunction with the routing with packet duplication and elimination in computer network as taught by Orda and Rom, the multi-path communication networking system including duplicating capability can enhance its operation performance, more specifically to ensuring the communication path/node error detected, corrected, and replaced in proper and efficient manner.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to improve the network communication system operation availability and network/system performance therein with a mechanism to enhance the data node/path connectivity, data debugging, data reliability, and data throughput which eventually will increase its performance, such as data throughput between internal and external devices.

b. First, it is not TRUE that Orda and Rom in combining with Ofek failed to teach "removing the first identifier from the data structure" as claimed by Applicant. Orda and Rom explicitly illustrated the routing through disjoint paths via incoming and outgoing packet data [fig. 5]. Data is/are structured including data header

Art Unit: 2114

(source/destination addresses), payload, ECC (checksum, etc...).

the data source and destination addresses can easily removed and

added for routing purpose. Ofek explicitly demonstrated data

packet structure including header, timestamp, priority bit, etc...

based on path identifiers used in supporting data communication transmission via Internet MPLS (multi protocol label swapping or tag switching) labels, ATM virtual circuit identifier and virtual path identifier (VCI/VPI), and IEEE 802 MAC (media access control) addresses, for mapping from an input port to an output port [fig. 6A, col. 8, lines 48 through col. 9, line 11 and col. 14, lines 13-31]. Therefore, it is very clear and it would have been obvious to an ordinary skill in the art to realize both Orda and Rom in combining with Ofek do teach Applicant's "identifying a first network component in a first path using a first identifier stored in a data structure" limitations.

Second, this "removing the first identifier from the data structure" limitation is notoriously well known in the network data routing arena. This is because data structure or data packet is formatted with its identifier in ordering for router, switches, hub, etc... for identifying its data transition path, data authentication, data tracking and checking. It is further



Art Unit: 2114

obvious that without the data identifier, network can not route data to and from devices.

c. In response to Applicant's argument that the references fail to show certain features of Applicant's invention, it is noted that the feature upon which Applicant relies (i.e., manipulate a data structure) is not recited in the rejected claim. Although the claim is interpreted in light of the specification, limitations from the specification is not read into the claims. *In re Van Guens*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's arguments filed 04/05/2007 have been fully considered but they are not persuasive.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Art Unit: 2114

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (571) 272-3660. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644.

The Tech Center 2100 phone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**DIEU-MINH THAI LE**  
**PRIMARY EXAMINER**  
**ART UNIT 2114**

DML  
05/22/07